

WHAT IS CLAIMED IS:

1. A belt loading apparatus for loading a flimsy continuous belt without damage onto a belt support and drive assembly including a front end having a first perimeter defining a first shape, the belt loading apparatus comprising:

a) a wall member defining a sleeve including an outer surface having a total outer surface area, a first edge and a second and opposite edge, said second edge having a second perimeter defining a second shape, said second shape of said second perimeter of said sleeve being a mirror image of said first shape of said first perimeter of said belt support and drive assembly; and

d) friction reducing members formed on said outer surface of said sleeve for temporarily supporting and spacing from said outer surface a flimsy continuous belt to be loaded onto said belt support and drive assembly, said friction reducing members each having a belt contact area such that a sum total of belt contact areas of all said friction reducing members is significantly less than said total outer surface area of said sleeve.

2. The belt loading apparatus of claim 1, wherein said sleeve comprises a semi-rigid belt.

3. The belt loading apparatus of claim 1, wherein said friction reducing members are conductive for preventing tribo-electric charging between them and said flimsy continuous belt.

4. The belt loading apparatus of claim 1 wherein said sleeve comprises an inflatable pneumatic device.

5. The belt loading apparatus of claim 1, including a protective device for placing over said flimsy continuous belt, said protective device having a circumference greater than a circumference of said flimsy continuous belt for slidably fitting over said flimsy continuous belt when supported on said sleeve.

6. The belt loading apparatus of claim 1, wherein said flimsy continuous belt is an imageable photoconductive member having an outer imaging surface for use in a xerographic image producing machine.

7. The belt loading apparatus of claim 1, wherein each said belt contact area of each of said friction reducing members has a convex curved profile.

8. The belt loading apparatus of claim 1, wherein each of said friction reducing members comprises a portion of a generally circular projection above said outer surface of said sleeve.

9. The belt loading apparatus of claim 2, wherein said semi-rigid belt has a thickness T1 within a range of 5 mils to 100 mils.

10. The belt loading apparatus of claim 5, wherein said inflated pneumatic device includes internal baffles for producing a desired shape and desired rigidity thereto after inflation.

11. The belt loading apparatus of claim 5, wherein said inflated pneumatic device is deflatable so as to collapse it into a relatively smaller shape and form for storage.

12. The belt loading apparatus of claim 6, wherein said protective device comprises black photo paper.

13. The belt loading apparatus of claim 6, wherein said protective device comprises a plastic belt having a thickness T2 less than a thickness T1 of said sleeve.

14. The belt loading apparatus of claim 8, wherein said portion of said generally circular projection comprises a ridge extending from said at least one edge to a direction opposite said at least one edge, and spaced apart in an orthogonal direction from adjacent such ridges.

15. The belt loading apparatus of claim 8, wherein said portion of said generally circular project comprises a mound forming part of an array of such mounds spaced apart from one another and extending in a first direction from said at least one edge to a point opposite said at least one edge.

16. The belt loading apparatus of claim 9, wherein said semi-rigid belt is a nickel belt.

17. The belt loading apparatus of claim 9, wherein said semi-rigid belt is made of a plastic material.

18. The belt loading apparatus of claim 15, wherein said array of such mounds is spaced apart from adjacent such array in an orthogonal direction relative to said first direction.

19. The belt loading apparatus of claim 17 wherein said plastic belt is made plastic material selected from among polyetheretherketone, polyimide, polyetherimide, polyethersulfone, polysulfone, polymethylpentene, polyvinylidene fluoride, ethylene-chlorotifluoroethylene, polycarbonate, biaxially oriented polyvinyl fluoride, biaxially oriented polyethylene terephthalate, and biaxially oriented polyethylene naphthalate.

20. The belt loading apparatus of claim 17, wherein said plastic material is a white opaque polyester film available under the trade name of Melinex 359 (trade name of ICI, Inc.).

21. A belt loading apparatus for loading a flimsy continuous belt onto a belt support and drive assembly, the belt loading apparatus comprising:

- a) a wall member defining a sleeve including an inner surface, and an outer surface having a total outer surface area and at least one edge;
- b) a holding cavity located within said sleeve and adjoining said inner surface for temporarily holding said belt support and drive assembly;
- c) at least one opening located at said at least one edge and opening into said holding cavity for allowing movement of said sleeve onto and back over said belt support and drive assembly; and
- d) friction reducing members on said outer surface for temporarily supporting and spacing a flimsy continuous belt to be loaded onto said belt support and drive assembly, said friction reducing members each having a belt contact area such that a total of all said belt contact areas is significantly less than said total outer surface area of said sleeve.

22. The belt loading apparatus of claim 21, wherein said holding cavity has a size and a shape for slidably fitting over said drive assembly for said flimsy continuous belt.

23. The belt loading apparatus of claim 21, wherein said sleeve when defining said holding cavity as an external perimeter about 10mm to 10cm less than an inner circumference of said flimsy continuous belt.

24. The belt loading of claim 21, wherein said sleeve includes another edge opposite said at least one edge, and a second opening located at said another edge.

25. The belt loading apparatus of claim 24, wherein said at least one edge and said second edge have a first diameter and a second diameter respectively, and said first diameter is slightly greater than said second diameter for producing a tapered profile in said sleeve for said another edge towards said at last one edge.